## **ABSTRACT**

An apparatus having two or more parallel carry chain structures, each of the carry chain structures comprising a series of logical structures, where at least one of the logical structures within each of the carry chain structures has an associated input node, output node and carry node. The input node corresponds to a function input term, the output node corresponds to an output term of the function and the carry node corresponds to a carry value to a following logical structure in the series of logical structures.